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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,377	02/01/2007	Juichi Kubo	062284	9876
38834 7590 06/10/2009 WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036				
EXAMINER MCNALLY, DANIEL				
ART UNIT		PAPER NUMBER		
1791				
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06/10/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/572,377

**Applicant(s)**

KUBO ET AL.

**Examiner**

DANIEL MCNALLY

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/5508)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Drawings***

1. The drawings were received on 3/4/2009. These drawings are accepted.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1 and 7 require controlling the air pressure "higher than atmospheric pressure," which is not supported by the specification. The specification provides support for controlling the pressure by increasing or decreasing the pressure, but the specification does not explicitly disclose that the pressure is higher than atmospheric pressure. It is recommended removing the requirement of the pressure to be greater than atmospheric pressure.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 and 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swiggett et al. [US4693778, of record, previously cited, herein "Swiggett"] in view of Berndt [US6582519, newly cited] and either one of Keyworth et al. [US5534101, of record, previously cited, herein "Keyworth"] or Ikushima [US6527142, newly cited].

Swiggett discloses a method and apparatus for applying conductor wiring to a substrate. The method comprises feeding an optical fiber through a nozzle (78) onto a substrate. The optical fiber is coated with an adhesive layer (32), however Swiggett does not disclose coating the optical fiber with an adhesive while passing the fiber through the nozzle, and Swiggett is silent as to keeping the amount of adhesive constant by controlling the pressure higher than atmospheric pressure.

Berndt discloses a method of coating an adhesive material onto an optical fiber. The method comprises passing the optical fiber (3) through a nozzle (7) with an inner diameter larger than the outer diameter of the optical fiber, and simultaneously ejecting the optical fiber with an adhesive coating thereon from the nozzle.

Keyworth discloses a method and apparatus for forming a waveguide on a substrate. The method comprises feeding a UV curable liquid from a nozzle onto a substrate, relatively moving the nozzle and the substrate and curing the UV curable liquid (column 4, lines 1-21). Keyworth discloses controlling the amount of air pressure greater than atmospheric pressure to the surface of the adhesive held in the nozzle to force the adhesive out of the nozzle.

Ikushima discloses a method of dispensing a constant amount of liquid from a nozzle. Ikushima discloses controlling the pressure applied to the liquid in the reservoir

to the ejection valve to control the amount of adhesive dispensed from the nozzle (column 1, line 57 - column 2, line 65).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Swiggett by applying the coating to the optical wiring while passing the wiring through the nozzle as taught by Berndt in order to control the amount of adhesive applied to the optical fiber, and to modify the method of Swiggett by controlling the amount of pressure applied to the liquid being dispensed as taught by either one of Keyworth or Ikushima in order to dispense a constant amount of adhesive.

With regard to claim 2, Keyworth discloses controlling the speed at which the nozzle is moved relative to the substrate, which will affect the rate at which the optical fiber needs to be fed. If the nozzle is moving faster the optical fiber will also need to be fed faster and if the nozzle is moved slower the optical fiber would need to be fed slower.

With regard to claims 3 and 4, Swiggett discloses relative movement between a dispenser and a substrate and be caused by either fixing the substrate and moving the dispenser, or fixing the dispenser and moving the substrate (column 3, lines 5-16).

With regard to claim 6, Berndt and Keyworth disclose dispensing an adhesive coating that is UV curable, and one of ordinary skill would appreciate curing the adhesive to the substrate using UV energy as taught by either one of Berndt or Keyworth.

With regard to claim 7, Swiggett discloses the apparatus comprises a nozzle (78) having an inner diameter larger than an outer diameter of the optical fiber, and a stage

for supporting a substrate, wherein in the stage and the optical fiber dispenser are movable relative to each other. Berndt discloses the nozzle is capable of dispensing an optical fiber and adhesive material at the same time through a nozzle with an inner diameter that is larger than the outer diameter of the optical fiber. Either one of Keyworth or Ikushima disclose a controller for controlling the amount of pressure being applied to push out the adhesive.

With regard to claims 8 and 9, Swiggett discloses the apparatus is capable of relative movement between a dispenser and a substrate and be caused by either fixing the substrate and moving the dispenser, or fixing the dispenser and moving the substrate (column 3, lines 5-16).

With regard to claim 10, Berndt and Keyworth disclose the apparatus comprises a UV irradiation unit for curing the adhesive material.

With regard to claim 11, Keyworth discloses a controller for controlling the speed at which the nozzle is moved relative to the substrate, which will affect the rate at which the optical fiber needs to be fed.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swiggett, Berndt, either one of Keyworth or Ikushima, and further in view of Hawkins [US3742107, herein "Hawkins"].

Swiggett as modified discloses a method and apparatus for optical fiber wiring. Applicant is referred to paragraph 5 for a detailed discussion of Swiggett as modified. Swiggett disclose an optical fiber but is silent as to a polymer optical fiber.

Hawkins discloses a method of making an optical fiber. Hawkins discloses glass fibers are well known, however polymeric optic fibers can be used and have the added benefit of increased strength and flexibility (column 1, lines 10-20).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Swiggett by using a polymeric optical fiber as taught by Hawkins in order to increase the strength and flexibility of the optical fiber.

#### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection. Applicant argues the previously cited art does not disclose controlling the pressure higher than atmospheric pressure to dispense a constant amount of adhesive. Newly cited Ikushima, and previously cited Keyworth disclose liquid dispensers that dispense a constant amount of liquid by controlling the pressure higher than atmospheric pressure to push out the liquid from the nozzle, and newly cited Berndt discloses the liquid dispenser can dispense a coating of adhesive around a optical fiber passing through the nozzle.

#### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL MCNALLY whose telephone number is (571)272-2685. The examiner can normally be reached on Monday - Friday 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel McNally/  
Examiner, Art Unit 1791

/John L. Goff/  
Primary Examiner, Art Unit 1791

DPM  
June 5, 2009